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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,249	02/18/2004	Stanley Loren Bentley	6890-74182	3138

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EXAMINER

WHITMORE, STACY

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/781,249	BENTLEY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Stacy A. Whitmore	2825	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1, 7, 8-11, 19-20, 26, 27-28, 30-31, 37-39, 40-42, and 50-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As for claim 1, applicant claims "retrieving assembly cost data....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

As for claim 7, applicant claims "the retrieving step....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

As for claim 8, applicant claims "the retrieving step....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

As for claim 9, applicant claims "the retrieving step....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

As for claim 10, applicant claims "the step of retrieving ....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

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As for claim 11, applicant claims "the step of retrieving ....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data.

Clarify

As for claim 19, applicant claims "retrieving....selected portion," which is unclear because applicant does not communicate clearly what machine retrieves the data.

Clarify

As for claim 20, applicant claims "retrieving step....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data.

Clarify

As for claim 26, applicant claims "the retrieving step....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data.

Clarify

As for claim 27, applicant claims "the retrieving step....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data.

Clarify

As for claim 28, applicant claims "the retrieving step....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data.

Clarify

As for claim 30, applicant claims "retrieving ....selected portion," which is unclear because applicant does not communicate clearly what machine retrieves the data.

Clarify

As for claim 31, applicant claims "the retrieving assembly cost....design data," and "retrieving assembly capability.....design data", which are unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

As for claim 37, applicant claims "retrieving assembly cost....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

As for claim 38, applicant claims "retrieving assembly cost....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

As for claim 39, applicant claims "retrieving assembly cost....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

As for claims 40-42, applicant claims "retrieving assembly capability....design data," which is unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

As for claims 50-52, applicant claims "the retrieving assembly cost....design data," and "retrieving assembly capability.....design data", which are unclear because applicant does not communicate clearly what machine retrieves the data. Clarify

#### Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-52 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-52 of copending Application No. 10/780,990. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims provide for methods and computer instructions for designing electronic assemblies and design data and the claims of patent application 10/780,990 provide for designing circuit board design data. The allowance of claims in the present applicant providing coverage for electronic assembly data would also provide patent coverage for circuit board design data.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-11, 13-14, 16, 19-28, 30-42, 44-45, 47, and 50-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Perry (US Patent 6,678,877).

4. As for the claims, Perry discloses the invention as claimed, including:

1. A method of designing an electronic assembly, the method comprising the steps of: transmitting a user interface application from a server machine to a client machine via a publicly-accessible global network [abstract; col. 18, lines 20-46], receiving user-supplied electronic assembly design data input into the client machine [abstract; col. 18, lines 20-46; figs. 6-7 ]; retrieving assembly cost data from an assembly cost database in response to the user-supplied electronic assembly design data [col. 9, lines 4-20, 41-44, 55-61, the data of BOM, size, price, and other ratings are costs of the assembly]; and updating the user interface application on the client machine in response to the assembly cost data [abstract; col. 18, lines 20-46, and col. 9, the user display is updated in accordance with user selections of components and there associated costs];
2. The method of claim 1, wherein the transmitting step includes transmitting the user interface application to the client machine via the publicly-accessible global network in response to a user-supplied request received by the server machine via the publicly-accessible global network [abstract; col. 18, lines 20-46, the user interface may be on the web, server, client machine, or other machine of choice];
3. The method of claim 1, wherein the transmitting step includes transmitting the user interface application from the server machine to the client machine via the internet [abstract; col. 18, lines 20-46, the user interface may be on the web, server, client machine, or other machine of choice];
4. The method claim 1, wherein the transmitting step includes transmitting an assembly cost database with the user interface application from the server machine to the client machine via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

5. The method of claim 1, wherein the receiving step includes receiving user-supplied electronic assembly design data via an input device of the client machine [abstract; col. 18, lines 20-46, the user interface may be on the web, server, client machine, or other machine of choice; figs. 6-7];
6. The method of claim 1, wherein the receiving step includes receiving user-supplied electronic assembly design data via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice; figs. 6-7];
7. The method of claim 1, wherein the retrieving step includes retrieving the assembly cost data from an assembly cost database stored on the client machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];
8. The method of claim 1, wherein the retrieving step includes retrieving the assembly cost data, via the publicly-accessible global network, from an assembly cost database stored on the server machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];
9. The method of claim 1, wherein the retrieving step includes retrieving the assembly cost data from the server machine via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];
10. The method of claim 1, further comprising the step of retrieving assembly capability data from an assembly capability database in response to the user-supplied electronic assembly design data [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];



11. The method of claim further comprising the step of updating the user interface application on the client machine based on the assembly capability data [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

13. The method of claim 1, further comprising the step of determining a per-unit assembly cost value based on the assembly cost data [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9 - especially price, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

14. The method of claim 13, wherein the determining step includes determining a per-unit setup cost value and a per-unit run cost value [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9 – col. 10 – where setup and run costs are component selections (costs of component) and simulations, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

16. The method of claim 13, wherein the updating step includes displaying the per-unit assembly cost value to the user [col. 9, lines 55-61];

19. The method of claim 1, further comprising the steps of:

determining a user selected-portion of the user interface application, retrieving an electronic assembly design image based on the user selected-portion, and displaying the electronic assembly design image on the client machine to the user [figs. 16A – 20A, col. 15-16 disclose various ways of display on the client machine];

20. A method of designing an electronic assembly, the method comprising the steps of: transmitting a user interface application from a server machine to a client machine via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice], receiving user-supplied electronic assembly design data input into the client machine [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be

transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice], retrieving assembly capability data from an assembly capability database in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice], and updating the user interface application on the client machine based on the assembly cost data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

21. The method of claim 20, wherein the transmitting step includes transmitting the user interface application to the client machine via the publicly-accessible global network in response to a user-supplied request received by the server machine via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

22. The method of claim 20, wherein the transmitting step includes transmitting the user interface application from the server machine to the client machine via the Internet [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

23. The method claim 20, wherein the transmitting step includes transmitting an assembly capability database with the user interface application from the server machine to the client machine via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

24. The method of claim 20, wherein the receiving step includes receiving user-supplied electronic assembly design data via an input device of the client machine [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database

information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

25. The method of claim 20, wherein the receiving step includes receiving user-supplied electronic assembly design data via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

26. The method of claim 20, wherein the retrieving step includes retrieving assembly capability data from an assembly capability database stored on the client machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

27. The method of claim 20, wherein the retrieving step includes retrieving assembly capability data, via the publicly-accessible global network, from an assembly capability database stored on the server machine based on the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

28. The method of claim 27, wherein the retrieving step includes retrieving the assembly capability data via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

30. The method of claim 20, further comprising the steps of:

determining a user selected-portion of the user interface application, retrieving an electronic assembly design image based on the user selected-portion, and displaying the electronic assembly design image on the client machine to the user [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A also show user selected portions of assembly design data];

31. A method of designing an electronic assembly, the method comprising the steps of: transmitting a user interface application from a server machine to a client machine via a publicly-accessible global network, receiving user-supplied electronic assembly design data input into the client machine, retrieving assembly cost data from an assembly cost database in response to the user-supplied electronic assembly design data, retrieving assembly capability data from an assembly capability database in response to the user-supplied electronic assembly design data, and updating the user interface application on the client machine based on at least one of the assembly cost data and the assembly capability data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

32. The method of claim 31, wherein the transmitting step includes transmitting the user interface application to the client machine via the publicly-accessible global network in response to a user-supplied request received by the server machine via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

33. The method of claim 31, wherein the transmitting step includes transmitting the user interface application from the server machine to the client machine via the Internet [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

34. The method claim 31, wherein the transmitting step includes transmitting an assembly cost database and an assembly capability database from the server machine to the client machine via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

35. The method of claim 31, wherein the receiving step includes receiving user-supplied electronic assembly desire data via an input device of the client machine [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

36. The method of claim 31, wherein the receiving step includes receiving user-supplied electronic assembly design data via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

37. The method of claim 31, wherein retrieving assembly cost data includes retrieving assembly cost data from an assembly cost database stored on the client machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines

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20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

38. The method of claim 31, wherein retrieving assembly cost data includes retrieving assembly cost data from an assembly cost database stored on the server machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

39. The method of claim 31, wherein retrieving assembly cost data includes retrieving the assembly cost data from an assembly cost database via the publicly-accessible global network wherein retrieving assembly capability data includes retrieving assembly capability data from an assembly capability database stored on the client machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

40. The method of claim 31, wherein retrieving assembly capability data includes retrieving assembly from an assembly capability database stored on the client machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

41. The method of claim 31, wherein retrieving assembly capability data includes retrieving assembly from an assembly capability database stored on the server machine in response to the user-supplied electronic assembly design data [abstract; col. 18, lines

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20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

42. The method of claim 31, wherein retrieving assembly capability data includes retrieving the assembly capability data from an assembly capability database via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

44. The method of claim 31, further composing determining a per-unit assembly cost value based on the assembly cost data [abstract; col. 18, lines 20-46, col. 9 especially price, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

45. The method of claim 44, wherein the determining step includes determining a per-unit setup cost value and a per-unit run cost value [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9 – col. 10 – where setup and run costs are component selections (costs of component) and simulations, figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

46. The method of claim 45, wherein determining a per-unit setup cost value and a per-unit run cost value includes determining a per-unit setup cost value and a per-unit run cost value for each work center of a electronic assembly process in response to the user-supplied electronic assembly design data [];

47. The method of claim 44, wherein the updating step includes displaying the per-unit assembly cost value to the user [col. 6 discloses capability data; abstract; col. 18, lines 20-46, col. 9 especially price – col. 10 – where setup and run costs are component

selections (costs of component) and simulations , figs. 6-7, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice];

50. An article comprising a computer-readable signal-bearing medium having therein a plurality of instructions which, when executed by a processor, cause the processor to: display a user interface application to a user of a client machine, retrieve assembly cost data from an assembly cost database in response to user-supplied electronic assembly design data input into the client machine, retrieve assembly capability data from an assembly capability database in response to the user-supplied electronic assembly design data, and update the user interface application on the client machine based on at least one of the assembly cost data and the assembly capability data [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

51. The article of claim 50, wherein the plurality of instructions, when executed by the processor, further cause the processor to retrieve the assembly cost data from a assembly cost database via a publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A];

52. The article of claim 50, wherein the plurality of instructions, when executed by the processor, further cause the processor to retrieve the assembly capability data from an assembly capability database via the publicly-accessible global network [abstract; col. 18, lines 20-46, col. 9, figs. 6-7, col. 6 discloses various capability data, the user interface and other database information may be transmitted to and from, or stored on any of the web, server, client machine, or other machine of choice, col. 15-16 disclose various methods of input of user supplied assembly design data, figs. 16A – 20A].



### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15, 17-18, and 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perry (US Patent 6,678,877) in view of Sebastian (Patent Number Re. 36,602).

6. As for the claims, Perry discloses the invention substantially as claimed, including:

Methods, and article comprising computer instructions for designing an electronic assembly as cited above in the rejection under 35 USC 102 (e) to Perry of claims 1-11, 13-14, 16, 19-28, 30-42, 44-45, 47, and 50-52 above and including the per unit setup cost value and per unit run value in response to user-supplied assembly design data as cited above.

Perry does not specifically disclose

15. The method of claim 14, wherein determining the per-unit setup cost value and the per-unit run cost value includes determining a per-unit setup cost value and a per-unit run cost value for each work center of an electronic assembly process in response to the user-supplied electronic assembly design data;

17. and 48. determining a tooling cost value in response to the user-supplied electronic assembly design data;

18. and 49. wherein the determining step includes determining a tooling cost value based on the assembly cost data;

Sebastian discloses determining costs related to user input (design or assembly data) to the work center and tooling costs [col. 2, lines 50-57].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Perry and Sebastian because both Perry and Sebastian are directed towards the design and manufacture of electronic parts. Further Utilizing Sebastian's costs of the work center and tooling as part of Perry's system would improve Perry's system by incorporating costs of manufacturing the product when not manufactured by others, which would provide Perry's system with a better cost analysis for manufacturing circuit boards [see Perry, col. 15, lines 43-45, and Sebastian, col. 2, lines 53-57].

7. Claims 12, 29, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perry (US Patent 6,678,877) in view of Vilella (US Patent Application Publication Number 2004/0208354).

8. As for the claims, Perry discloses the invention substantially as claimed, including:

Methods, and article comprising computer instructions for designing an electronic assembly as cited above in the rejection under 35 USC 102 (e) to Perry of claims 1-11, 13-14, 16, 19-28, 30-42, 44-45, 47, and 50-52 above and including updating the user interface application on the client machine based on the assembly capability data as cited above.

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Perry does not specifically disclose displaying a traffic light image to a user.

As for claims 12, 29, and 43, Vilella discloses displaying a traffic light image to a user [abstract, paragraphs 0004-0005, 0025, and 0044].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Perry and Vilella because using a traffic light displayed to a user would provide feedback information to the user such as status and error information so that the user could interactively respond to assembly design to make corrections [see Vilella, paragraphs 0004-0005, 0025, and 0044].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stacy A. Whitmore whose telephone number is (571) 272-1685. The examiner can normally be reached on Monday-Thursday, alternate Friday 6:30am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on (571) 272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stacy A Whitmore  
Primary Examiner  
Art Unit 2825

SAW  
August 22, 2006

A handwritten signature in black ink, appearing to be 'SAW' followed by a stylized flourish.